AMENDMENTS TO THE CLAIMS:

Please amend the claims, as indicated below. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1.   (Currently amended)   A method for evaluating customer value to guide loyalty and retention programs comprising:

generating, by a processing system, a hazard function model based on attributes relating to a plurality of current customer accounts;

generating, by the processing system, a hazard function for [[an]] a first existing customer, to determine probability of churn, based on the hazard function model and account data associated with the first existing customer and corresponding to the attributes;

calculating a gain in lifetime value for the first existing customer based on a change in the hazard function resulting from a retention effort; and

determining a focus for retention-based interactions with the first existing customer based on at least one of the hazard function and gain in lifetime value, wherein determining [[a]] the focus comprises clustering the hazard function for the first existing customer and hazard functions for a plurality of other existing customers so that the hazard functions are grouped together according to shape, each group representative of a customer set.

2. (Currently amended) The method of claim 1, wherein calculating the gain in lifetime value includes:

calculating a lifetime value based on original contract terms and revenue associated with the <u>first existing</u> customer; and

calculating the gain in lifetime value based on a change in the hazard function resulting from a new contract period.

3. (Currently amended) The method of claim 1, wherein determining [[a]] <u>the</u> focus for retention-based interactions with the <u>first existing</u> customer includes:

analyzing the shape of the hazard function generated for the <u>first existing</u> customer; and

specifying a set of marketing techniques based on the shape of the hazard function.

4. (Currently amended) The method of claim 1, wherein determining [[a]] <u>the</u> focus for retention-based interactions with the <u>first existing</u> customer <u>includes</u>:

specifying a set of incentives to offer the <u>first existing</u> customer based on the gain in lifetime value.

5. (Original) The method of claim 3, wherein specifying the set of marketing techniques based on the shape includes:

determining, based on the shape of the hazard function, there is no effect on churn of a contract expiration.

6.   (Original)   The method of claim 5, wherein specifying the set of marketing

techniques includes:

taking no further steps to deter churn.

7.   (Original)   The method of claim 3, wherein specifying the set of marketing

techniques based on the shape includes:

determining, based on the shape of the hazard function, that there is a

small increase in probability of churn at contract expiration, with an

elevated post-expiration churn.

8.   (Original)   The method of claim 7, wherein specifying the set of marketing

techniques includes:

having a moderate pre-expiration effort where new contracts or continued

contracts are the goal.

9.   (Previously presented)   The method of claim 3, wherein specifying the set of

marketing techniques based on the shape includes:

determining, based on the shape of the hazard function, that there is a

large spike indicating high probability of churn at contract expiration

and low probability of churn thereafter.

10.   (Original)   The method of claim 9, wherein specifying the set of marketing

techniques includes:

concentrating effort on pre-expiration of contract where a contract renewal

may not be required.

11.   (Original)   The method of claim 3, wherein specifying the set of marketing

techniques based on the shape includes:

determining, based on the shape of the hazard function, that there is a

large increase in probability of churn at expiration with high and

increasing post-expiration probability of churn.

12.   (Currently amended).   The method of claim 11, wherein specifying the set of

marketing techniques includes:

specifying a high intensity pre-expiration effort with continued competitive

offers to maintain the <u>first existing</u> customer.

13.   (Currently amended)   The method of claim 4, wherein specifying the

incentives includes:

determining that a value of the set of incentives offered to the <u>first existing</u>

customer does not exceed the gain in lifetime value.

14.   (Cancelled).

15.   (Currently amended)   The method of claim 1, wherein determining [[a]] <u>the</u>

focus for retention-based interactions with the <u>first existing</u> customer includes:

determining, based on the overall shape of the clustered hazard functions,

a focus for retention-based interactions for each customer set.

16.   (Currently amended)   An apparatus for evaluating customer value to guide

loyalty and retention programs comprising:

a computer, comprising:

a first calculating ~~module~~ component for generating a hazard

function model based on attributes relating to a plurality of

current customer accounts;

a generating ~~module~~ component for generating a hazard function

for [[an]] a first existing customer, to determine probability of

churn, based on the hazard function model and account data

associated with the first existing customer and

corresponding to the attributes;

a second calculating ~~module~~ component for calculating a gain in

lifetime value for the first existing customer based on a

change in the hazard function resulting from a retention

effort;

a determining ~~module~~ component for determining a focus for

retention-based interactions with the first existing customer

based on at least ~~one of~~ the hazard function ~~and the gain in~~

~~lifetime value~~; and

a clustering ~~module~~ component for clustering the hazard function

for the first existing customer and hazard functions for a

plurality of other existing customers so that the hazard

functions are grouped together according to shape, each

group representative of a customer set[[.]]; and

a display device displaying at least one of the hazard function, the gain in

lifetime value for the first existing customer, and the focus for

retention-based interactions with the first existing customer.

17. (Currently amended)   The apparatus of claim 16, wherein the second

calculating ~~module~~ component for calculating the gain in lifetime value

calculates a lifetime value based on original contract terms and revenue

associated with the first existing customer; and

calculates the gain in lifetime value based on a change in the hazard

function resulting from a new contract period.

18. (Currently amended)   The apparatus of claim 16, wherein the determining

~~module~~ component includes:

an analyzing ~~module~~ component for analyzing the shape of the hazard

function generated for the first existing customer; and

a specifying ~~module~~ component for specifying a set of marketing

techniques based on the shape of the hazard function.

19.   (Currently amended)   The apparatus of claim 16, wherein the determining ~~module~~ component includes:

        a specifying ~~module~~ component for specifying a set of incentives to offer the first existing customer based on the gain in lifetime value.

20.   (Currently Amended)   The apparatus of claim 18, wherein the specifying ~~module~~ component for specifying the set of marketing techniques based on the shape includes:

        a determining ~~module~~ component for determining, based on the shape of the hazard function, there is no effect on churn of a contract expiration.

21.   (Currently amended)   The apparatus of claim 20, wherein the specifying ~~module~~ component specifies taking no further steps to deter churn.

22.   (Currently amended) The apparatus of claim 18, wherein the specifying ~~module~~ component for specifying the set of marketing techniques based on the shape includes:

        a determining ~~module~~ component for determining, based on the shape of the hazard function, that there is a small increase in probability of churn at contract expiration, with an elevated post-expiration churn.

23.   (Currently amended)   The apparatus of claim 22, wherein the specifying

~~module~~ component specifies a moderate pre-expiration effort where new

contracts or continued contracts are the goal.

24.   (Currently amended)   The apparatus of claim 18, wherein the specifying

~~module~~ component for specifying the set of marketing techniques based on the

shape includes:

    a determining ~~module~~ component for determining, based on the shape of

    the hazard function, that there is a large spike indicating high

    probability of churn at contract expiration and low probability of

    churn thereafter.

25.   (Currently presented)   The apparatus of claim 24, wherein the specifying

~~module~~ component specifies concentrating effort on pre-expiration of contract

where a contract renewal may not be required.

26.   (Currently amended)   The apparatus of claim 18, wherein the specifying

~~module~~ component for specifying the set of marketing techniques based on the

shape includes:

    a determining ~~module~~ component for determining, based on the shape of

    the hazard function, that there is a large increase in probability of

    churn at expiration with high and increasing post-expiration

    probability of churn.

27.   (Currently amended)   The apparatus of claim 26, wherein the specifying

~~module~~ component specifies a high intensity pre-expiration effort with continued

competitive offers to maintain the first existing customer.

28.   (Currently amended)   The apparatus of claim 19, wherein the specifying

~~module~~ component includes a determining ~~module~~ component for determining

that a value of the set of incentives does not exceed the gain in lifetime value.

29.   (Cancelled).

30.   (Currently amended)   The apparatus of claim 16, wherein the determining

~~module~~ component determines, based on the overall shape of the clustered

hazard functions, a focus for retention-based interactions for each customer set.

31.   (Currently amended)   A computer-readable medium including instructions,

executable by a processor, for performing a method for evaluating customer

value to guide loyalty and retention programs, the method comprising:

generating a hazard function model based on attributes relating to a

plurality of current customer accounts;

generating a hazard function for [[an]] a first existing customer, to

determine probability of churn, based on the hazard function model

and account data associated with the first existing customer and

corresponding to the attributes;

calculating a gain in lifetime value for the <u>first existing</u> customer based on

a change in the hazard function; and

determining a focus for retention-based actions based on at least ~~one of~~

the hazard function ~~and gain in lifetime value~~, wherein determining

[[a]] <u>the</u> focus comprises clustering the hazard function for the <u>first</u>

<u>existing</u> customer and hazard functions for a plurality of other

existing customers so that the hazard functions are grouped

together according to shape, each group representative of a

customer set.

32. (Currently amended)   The computer-readable medium of claim 31, wherein

calculating the gain in lifetime value includes:

calculating a lifetime value based on original contract terms and revenue

associated with the <u>first existing</u> customer; and

calculating the gain in lifetime value based on a change in the hazard

function resulting from a new contract period.

33. (Currently amended)   The computer-readable medium of claim 31, wherein

determining [[a]] <u>the</u> focus for retention-based actions includes:

analyzing the shape of the hazard function generated for the <u>first existing</u>

customer; and

specifying a set of marketing techniques based on the shape of the hazard

function.

34.   (Currently amended)   The computer-readable medium of claim 31, wherein determining [[a]] the focus for retention-based actions includes:

specifying a set of incentives offered to the first existing customer based on the gain in lifetime value.

35.   (Original)   The computer-readable medium of claim 33, wherein specifying the set of marketing techniques based on the shape includes:

determining, based on the shape of the hazard function, there is no effect on churn of a contract expiration.

36.   (Original)   The computer-readable medium of claim 35, wherein specifying the set of marketing techniques includes:

taking no further steps to deter churn.

37.   (Original)   The computer-readable medium of claim 33, wherein specifying the set of marketing techniques based on the shape includes:

determining, based on the shape of the hazard function, that there is a small increase in probability of churn at contract expiration, with an elevated post-expiration churn.

38.   (Original)   The computer-readable medium of claim 37, wherein specifying the set of marketing techniques includes:

having a moderate pre-expiration effort where new contracts or continued

contracts are the goal.

39.   (Previously presented)   The computer-readable medium of claim 33, wherein

specifying the set of marketing techniques based on the shape includes:

determining, based on the shape of the hazard function, that there is a

large spike indicating high probability of churn at contract expiration

and low probability of churn thereafter.

40.   (Original)   The computer-readable medium of claim 39, wherein specifying the

set of marketing techniques includes:

concentrating effort on pre-expiration of contract where a contract renewal

may not be required.

41.   (Original)   The computer-readable medium of claim 33, wherein specifying the

set of marketing techniques based on the shape includes:

determining, based on the shape of the hazard function, that there is a

large increase in probability of churn at expiration with high and

increasing post-expiration probability of churn.

42.   (Currently amended)   The computer-readable medium of claim 41, wherein

specifying the set of marketing techniques includes:

specifying a high intensity pre-expiration effort with continued competitive

offers to maintain the <u>first existing</u> customer.

43.   (Previously presented)   The computer-readable medium of claim 34, wherein

specifying the incentives includes:

determining that a value of the set of incentives does not exceed the gain

in lifetime value.

44.   (Cancelled).

45.   (Currently amended)   The computer-readable medium of claim 31, wherein

determining [[a]] <u>the</u> focus for retention-based actions includes:

determining, based on the overall shape of the clustered hazard functions,

a focus for retention-based actions for each customer set.

46.   (Currently amended)   A system for evaluating customer value to guide

loyalty and retention programs comprising:

means for generating a hazard function model based on attributes relating

to a plurality of current customer accounts;

means for generating a hazard function for [[an]] <u>a first</u> existing customer,

to determine probability of churn, based on the hazard function

model and account data associated with the <u>first existing</u> customer

and corresponding to the attributes;

means for calculating a gain in lifetime value for the <u>first existing</u> customer

based on a change in the hazard function;

means for determining a focus for retention-based actions based on at

least ~~one of~~ the hazard function<u>;</u> ~~and the gain in lifetime value; and~~

means for clustering the hazard function for the <u>first existing</u> customer and

hazard functions for a plurality of other existing customers so that

the hazard functions are grouped together according to shape,

each group representative of a customer set[[.]]<u>; and</u>

<u>means for displaying at least one of the hazard function, the gain in</u>

<u>lifetime value for the first existing customer, and the focus for</u>

<u>retention-based actions.</u>

47.   (Currently amended)   The system of claim 46, wherein the means for

calculating the gain in lifetime value includes:

means for calculating a lifetime value based on original contract terms and

revenue associated with the <u>first existing</u> customer; and

means for calculating the gain in lifetime value based on a change in the

hazard function resulting from a new contract period.

48.   (Currently amended)   The system of claim 46, wherein the means for

determining includes:

means for analyzing the shape of the hazard function generated for the

<u>first existing</u> customer; and

means for specifying a set of marketing techniques based on the shape of

the hazard function.

49.   (Currently amended)   The system of claim 46, wherein the means for

determining includes:

means for specifying a set of incentives to offer the <u>first existing</u> customer

based on the gain in lifetime value.

50.   (Previously presented)   The system of claim 48, wherein the means for

specifying the set of marketing techniques based on the shape includes:

means for determining, based on the shape of the hazard function, that

there is no effect on churn of a contract expiration.

51.   (Previously presented)   The system of claim 50, wherein the means for

specifying the set of marketing techniques specifies taking no further steps to

deter churn.

52.   (Previously presented)   The system of claim 48, wherein the means for

specifying the set of marketing techniques based on the shape includes:

means for determining, based on the shape of the hazard function, that

there is a small increase in probability of churn at contract

expiration, with an elevated post-expiration churn.

53.   (Previously presented)   The system of claim 52, wherein the means for

specifying the set of marketing techniques specifies a moderate pre-expiration

effort where new contracts or continued contracts are the goal.

54.   (Previously presented)   The system of claim 48, wherein the means for

specifying the set of marketing techniques based on the shape includes:

        means for determining, based on the shape of the hazard function, that

                there is a large spike indicating high probability of churn at contract

                expiration and low probability of churn thereafter.

55.   (Previously presented)   The system of claim 54, wherein the means for

specifying the set of marketing techniques specifies concentrating effort on pre-

expiration of contract where a contract renewal may not be required.

56.   (Currently amended)   The system of claim 48, wherein the means for

specifying the set of marketing techniques based on the shape includes:

        means for determining, based on the shape of the hazard function, that

                there is a large increase in probability of churn at expiration with

                high and increasing post-expiration probability of churn.

57.   (Currently amended)   The system of claim 56, wherein the means for

specifying the set of marketing techniques specifies a high intensity pre-

expiration effort with continued competitive offers to maintain the <u>first existing</u>

customer.

58.   (Previously presented)   The system of claim 49, wherein the means for

specifying the incentives includes:

      means for determining that a value of the set of incentives does not

          exceed the gain in lifetime value.

59.   (Cancelled).

60.   (Currently amended)   The system of claim 46, wherein the means for

determining [[a]] <u>the</u> focus for retention-based actions includes:

      means for determining, based on the overall shape of the clustered hazard

          functions, a focus for retention-based actions for each customer

          set.

61.   (Currently amended)   A method for evaluating customer value to guide

loyalty and retention programs comprising:

      generating, by a multilayer feed-forward neural network, a hazard function

          for [[an]] <u>a first</u> existing customer, to determine probability of churn,

based on account data associated with the <u>first existing</u> customer

and corresponding to a set of attributes;

calculating, for the <u>first existing</u> customer, a gain in lifetime value based on

a change in the hazard function resulting from a retention effort;

and

determining a focus for a retention-based program based on at least ~~one~~

~~of~~ the hazard function ~~and the gain in lifetime value~~, wherein

determining [[a]] <u>the</u> focus comprises clustering the hazard function

for the <u>first existing</u> customer and hazard functions for a plurality of

other existing customers so that the hazard functions are grouped

together according to shape, each group representative of a

customer set.

62.   (Currently amended)   The method of claim 61 further comprising:

implementing the ~~program~~ <u>programs</u> based on the determined focus.

63.   (Currently amended)   A method for evaluating customer value to guide

loyalty and retention programs comprising:

generating, by a processing system and for each of a plurality of

customers, a hazard function to determine a probability of churn for

each customer, the hazard function based on attributes relating to

customer account information;

identifying a temporal-based retention effort based on the hazard function

for each of the plurality of customers;

calculating, for each of the plurality of customers, an expected gain in

value from the identified retention effort; and

determining a focus for customer interaction based on the expected gain

in value, wherein determining [[a]] the focus comprises clustering

the hazard function for ~~the customer and hazard functions for a~~

~~plurality of other existing customers~~ each of the plurality of

customers so that the hazard functions are grouped together

according to shape, each group representative of a customer set.

64.   (Currently amended)   The method of claim 63, wherein generating [[a]] the

hazard function comprises:

generating [[a]] the hazard function, based on a reference hazard function

model, for each of the plurality of customers.

65.   (Previously presented)   The method of claim 63, wherein the temporal-based

retention effort comprises retention actions directed to each customer during a

first time period and retention actions directed to each customer during a second

time period occurring after the first time period.

66.   (Currently amended)   The method of claim 1, wherein calculating [[a]] the

gain in lifetime value ~~based on a change in the hazard function resulting from a~~

~~retention effort~~ comprises calculating expected revenue multiplied by an increase

in remaining lifetime resulting from the retention effort.

67.   (Currently amended)   The method of claim 16, wherein the second

calculating ~~module~~ component calculates the gain in lifetime value ~~based on a~~

~~change in the hazard function resulting from a retention effort~~ by calculating

expected revenue multiplied by an increase in remaining lifetime resulting from

the retention effort.

68.   (Currently amended)   The computer-readable medium of claim 31, wherein

calculating [[a]] the gain in lifetime value ~~based on a change in the hazard~~

~~function~~ comprises calculating expected revenue multiplied by an increase in

remaining lifetime resulting from a retention effort.

69.   (Previously presented)   The system of claim 46, wherein the means for

calculating a gain in lifetime value calculates the gain in lifetime value based on a

change in the hazard function by calculating expected revenue multiplied by an

increase in remaining lifetime resulting from a retention effort.

70.   (Previously presented)   The method of claim 61, further comprising:

training the neural network to generate a hazard function model based on

account data associated with a plurality of current customer

accounts and corresponding to the set of attributes; and

wherein generating a hazard function includes generating a hazard

function for an existing customer, to determine probability of churn,

based on the hazard function model and the account data

associated with the customer and corresponding to a set of

attributes.

71.   (Previously presented)   The method of claim 70, wherein training the neural

network comprises loading an input layer of the neural network with values

representing the set of attributes for the plurality of current customer accounts.